

5-28-2003

# 9th Annual Governors State University Student Research Conference Proceedings

Shailendra Kumar Ph.D., Editor

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LYDIA A. MORROW RUETTEN  
UL

*Proceedings of the*  
9<sup>th</sup> Annual GSU  
**Student Research Conference**



Governors State University  
**Wednesday, May 28, 2003**  
**9 a.m. - 5 p.m.**

Editor:  
Dr. Shelly Kumar  
Division of Science  
College of Arts and Sciences



# **Proceedings of the 9th Annual GSU Student Research Conference**

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**Governors State University**  
University Park, IL 60466

**May 28, 2003**

**Editor:**

**Dr. Shelly Kumar**  
**Division of Science**  
**College of Arts and Sciences**



# **PARTICIPANTS**

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## **Students of Governors State University**

**College of Arts and Sciences**

**College of Business and Public Administration**

**College of Education**

**College of Health Profession**

**Board of Governors**

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May 2003

Dear Conference Participants:

Welcome to Governors State University. We are honored to host the Thirteenth Annual Student Research Conference.

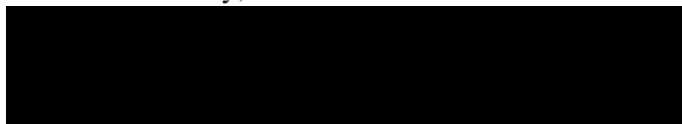
This event celebrates scholarship, recognizes the men and women who advance knowledge, and reminds us of the central purpose of any university.

Our task in higher education is to gather information for a better understanding of our physical and social world. And as a next step, we transfer that information through publications and presentations, and especially by teaching in the classroom.

Best of luck to each of you in your presentations.

And while you are here, I hope you will take a few minutes to walk about our campus and especially visit the exhibits in the Nathan Manilow Sculpture Park.

Sincerely,



Stuart I. Fagan  
President

## **A MESSAGE FROM THE CONFERENCE STEERING COMMITTEE**

The steering committee is pleased to announce the 9th Annual GSU Student Research Conference to be held on May 28, 2003. In the past eight conferences, the quality of the presentations was at par with presentations at any professional conferences. This conference has become a tradition in excellence, and we are confident that today again we will witness another session of quality presentations by our students. This conference will be presented in its original format and with its original objectives:

1. To provide students an opportunity to present their research work before an audience of their peers, and to use the comments they receive to improve presentations made at professional conferences.
2. To provide a forum to highlight research accomplishments at GSU, and honor students presenting their research work.
3. To generate enthusiasm among the student body in general, and encourage them to pursue research and other scholarly activities.
4. To enhance communications in the area of research among the four colleges at GSU. The interactions may also lead to collaborative work among students and faculty of different colleges.
5. To enhance the image of GSU in the area of teaching, as research is considered an integral part of teaching at the university level. In the long run a larger number of students attracted to research would enroll at GSU to pursue higher education.

The committee hopes that you will enjoy the conference, that you share in the excitement of doing research, and that you will look forward to participating in future student and professional conferences.

# PROGRAM SUMMARY

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## Engbretson Hall:

8:30 A.M. – 9:00 A.M.	Conference Registration & Continental Breakfast
9:00 A.M. – 9:20 A.M.	Welcome and Introduction
9:20 A.M. – 10:20 A.M.	Podium Presentations
10:20 A.M. – 10:40 A.M.	Refreshment Break
10:40 A.M. – 12:00 Noon	Podium Presentations

## Hall of Honors:

12:00 Noon – 12:45 P.M.	Lunch
12:45 P.M. – 12:50 P.M.	Greetings and Introduction of Speaker
12:50 P.M. – 1:30 P.M.	Keynote Address
1:30 P.M. – 2:00 P.M.	Poster Presentations

## Engbretson Hall:

2:00 P.M. – 3:20 P.M.	Podium Presentations
3:20 P.M. – 3:30 P.M.	Certificates Presentation to Student Participants
3:30 P.M. – 3:50 P.M.	Refreshment Break
3:50 P.M. – 5:10 P.M.	Podium Presentations
5:10 P.M. – 5:15 P.M.	Concluding Remarks



## KEYNOTE SPEAKER BIOGRAPHY

The Student Research Conference Steering Committee is proud to announce that the keynote speaker for the lunch will be:

### **Dr. Joy Hammel, Ph.D., OTR/L, FAOTA**

Assistant Professor

Departments of Occupational Therapy & Disability and Human Development, and the  
Joint Doctoral Program in Disability Studies  
University of Illinois, Chicago.

Dr. Hammel received her Bachelor's degree in Occupational Therapy from the University of Wisconsin-Madison, a Master's degree in Education from San Francisco State University, and a Ph.D. in Educational Psychology from the University of California-Berkeley. Her scholarship focuses on community living and participation choice and control with people with disabilities and older adults. She is particularly interested in participatory action research in which the disability and aging communities actively engage, shape and lead research that can be directly used to effect systems and policy level changes. Dr. Hammel has served as principal investigator on research grants from the National Institute on Disability and Rehabilitation Research, the National Institute on Aging, and the Retirement Research Foundation. Current grants examine: supports and barriers to moving out of nursing homes to the community, the impact of home modifications and environmental interventions on long term community living for older adults and for people aging with developmental disabilities, and outcomes of a national systems change effort to finance assistive technology and environmental adaptations. She also serves as Co-Principal Investigator on the Center for Outcomes Research and Education, a national center sponsored by the American Occupational Therapy Foundation and Association that brings together occupational therapy scholars from around the world. Dr. Hammel has worked as an occupational therapist, educator, researcher, and community activist for over 16 years, and has published and presented extensively on aging, disability, and the environmental supports and barriers.

# CONFERENCE PROGRAM

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## Conference Registration & Continental Breakfast

8:30 A.M. Hall of Governors

## Program Commencement Engbretson Hall

9:00 A.M. ***Welcome and Introduction:***

Dr. Shelly Kumar  
Division of Science  
College of Arts and Sciences

### ***Greetings:***

Dr. Paul Keys, Provost

## Podium Presentations Engbretson Hall

### **Session I Moderator:**

Professor Cynthia Carr  
Division of Nursing, Communication Disorders,  
Occupational Therapy, and Physical Therapy  
College of Health Professions

9:20 A.M. "THE IMPACT OF FIBROMYALGIA ON THE OCCUPATION OF MARRIAGE: A PHENOMENOLOGICAL INQUIRY", Josephine M. Burriss, and Patti Kalvelage\*, Occupational Therapy, Division of Nursing, Communication Disorders, Occupational Therapy, and Physical Therapy, CHP. p 14.

9:40 A.M. "AN ICONOGRAPHIC STUDY OF THE TLINGIT TOTEM POLE LOCATED IN JOLIET, ILLINOIS", Sharon L. Quarcini and Arthur Bourgeois\*, Art History, Division of Liberal Arts, CAS. p 15.

10:00 A.M. "THE SYNTHESIS AND PHOTOLYSIS OF A THIOCARBAMATE (METHYLTHIOCARBAMIC ACID S-PHENOL ESTER)", Soretta Patton, and Joseph Addison\*, Analytical Chemistry, Division of Science, CAS. p 16.

10:20 A.M. ***Refreshment Break***

**Session II Moderator:**

Dr. Linda Buyer  
Division of Psychology and Counseling  
College of Education

- 10:40 A.M. "INFORMATIONAL TECHNOLOGY PROJECT PLANS SHOULD INCLUDE MODIFYING ORGANIZATIONAL BEHAVIOR", Debra Zyer, and Jun Zhao\*, Liberal Arts/Business Administration, BOG. p 17.
- 11:00 A.M. "THE PSYCHOLOGICAL ABUSE ASSESSMENT FOR THE WORKPLACE: INITIAL TESTS OF VALIDATION", Lori Davis and Lori McKinney \*, Psychology, Division of Psychology and Counseling, COE. p 18.
- 11:20 A.M. "SUPPORT SERVICES AND ACCESS TOOLS NEEDED TO INSURE THE HISPANIC POPULATION ENGAGE IN THE HIGHER EDUCATION EXPERIENCE", Claude Robert Hill and Adriela Fernandez\*, Social Sciences, Division of Liberal Arts, CAS. p 19.
- 11:40 A.M. "DISPARITIES IN HEALTH OUTCOMES: THE IMPACT OF RACE AND GENDER ON ISCHEMIC CONGESTIVE HEART FAILURE", Lisa Aponte-Soto, Shilpa Gupta, Yang-Hee Joo, and Jay J. Shen \*, Health Administration, Division of Social Work, Addiction Studies, and Health Administration, CHP. p 20.

**Conference Lunch**

Hall of Honors

12:00 P.M.

***Lunch***

12:45 P.M.

***Greetings:***

Dr. Stuart I. Fagan, President

***Introduction of Speaker:***

Dr. Paul Keys, Provost

***Keynote Speaker***

Dr. Joy Hammel  
University of Illinois, Chicago

**Poster Presentations**

Hall of Honors

1:30 P.M.

"PHYSICIAN-PATIENT COMMUNICATION DURING MEDICAL CONSULTATIONS", Julie Carlson and Ana Kong\*, Communications and Training, Division of Liberal Arts CAS. p 29.

"Methods Development for the Evaluation of the Distinct Separation of Small Sample Volumes (Acetylene, Ethylene) per Gas Chromatography", Zipporah Magee and Joseph Addison \*, Analytical Chemistry, Division of Science, CAS. p 30.

"THE EFFECTS OF MUSIC ON MATERNAL STRESS DURING PREGNANCY", Angela Davault and Catherine Brady\*, Occupational Therapy, Division of Nursing, Communication Disorders, Occupational Therapy, and Physical Therapy, CHP. p 31.

"SOUTH SUBURBAN RESIDENTIAL CONSTRUCTION: A COMPARATIVE STUDY TO THE WORK OF FRANK LLOYD WRIGHT", Michael W. Fanello and Frances Kostarelos\*, Integrative Studies, Division of Liberal Arts, CAS. p 32.

"PERCENT OF ZINC IN THE U.S. CENT (PENNY) DATA ANALYSIS", Ryan M. Neis and Karen D'Arcy\*, Analytical Chemistry, Division of Science, CAS. p 33.

"THE ROLE OF THE OCCUPATIONAL THERAPIST IN INCREASING FUNCTIONAL HAND MOVEMENTS IN CHILDREN WITH SPASTIC CEREBRAL PALSY RECEIVING BOTOX INJECTION", Adedayo Mercy Ogunsanya and Jessica Pedersen\*, Occupational Therapy, Division of Nursing, Communication Disorders, Occupational Therapy, and Physical Therapy, CHP. p 34.

"INHIBITION OF BUTYRYLCHOLINESTERASE BY PHENYL THIOCARBAMATE", Soretta Patton, Joyce Mohberg\*, and Joseph Addison\*, Analytical Chemistry, Division of Science, CAS. p 35.

## Podium Presentations

Engbretson Hall

### Session III Moderator:

Dr. Frances Kostarelos  
Division of Liberal Arts  
College of Arts and Sciences

- 2:00 P.M. "REDUCING PUBLIC SPEAKING ANXIETY", Thomas C. Lux and Ana Kong\*, Communication and Training, Division of Liberal Arts, CAS. p 21.
- 2:20 P.M. "SOURCES OF FINANCING FOR PRIVATE ENTERPRISES IN PARAGUAY, NIGERIA AND GHANA", Richard Kofi Osei and Hekki Heino\*, Business Administration, Division of Accounting, Finance, and Economics, CBPA. p 22.
- 2:40 P.M. "A STUDY OF TWO SMALL COMMUNITIES IN THE SOUTH SUBURBAN REGION OF CHICAGO, EACH OF WHICH HAS A HIGH-QUALITY NATURE PRESERVE. WHY DOES ONLY ONE COMMUNITY HAVE A NATURE CENTER?", Patricia Brownlow and Frances Kostarelos\*, Liberal Arts, BOG. p 23.

3:00 P.M.

“KNOWLEDGE FOR DEVELOPMENT”, Kenneth F. Earls and Adriela Fernandez\*, Communications and Training, Division of Liberal Arts, CAS. p 24.

### **Certificates Presentation**

Engbretson Hall

3:20 P.M.

Dr. Stuart I. Fagan, President

3:40 P.M.

### ***Refreshment Break***

#### **Session IV Moderator:**

Dr. Akkanad Isaac  
Division of Management, Marketing, and Public  
Administration  
College of Business and Public Administration

4:00 P.M.

“THE TIGHTROPE WALK OF HUMAN RESOURCE PROFESSIONALS”, Donna Nemeth and Marsha Katz\*, Business Administration, Division of Management, Administrative Sciences, Marketing, and Public Administration, CBPA. p 25.

4:20 P.M.

“THE EVOLUTION OF MEDICARE REFORM: THE ENACTMENT OF THE MEDICARE+CHOICE PROGRAM”, Lisa Aponte-Soto and Kyusuk Chung\*, Health Administration, Division of Health Administration, CHP. p 26.

4:40 P.M.

“MOVEMENT, TRANSPORTATION & SHARED SPACES, A CASE STUDY: BURBANK, ILLINOIS”, Claudia Robuck and Fran Kostarelos\*, Communications, Division of Liberal Arts, CAS. p 27.

5:00 P.M.

*Concluding Remarks*  
Dr. Shelly Kumar

## **ABSTRACTS OF PAPERS**

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Governors State University  
University Park , Illinois

# PODIUM PRESENTATIONS

# **THE IMPACT OF FIBROMYALGIA ON THE OCCUPATION OF MARRIAGE: A PHENOMENOLOGICAL INQUIRY**

Josephine M. Burriss Patti Kalvelage\*

Occupational Therapy  
Division of Nursing, Communication Disorders, Occupational Therapy, and Physical  
Therapy, CHP

## **ABSTRACT**

The purpose of this study is to gain an understanding of how fibromyalgia affects an individual's ability to function in his or her occupational roles, specifically in the performance areas of activities of daily living, work and productive activities, and leisure activities, and subsequently how fibromyalgia impacts the spouse and the occupation of marriage, as perceived by an individual with fibromyalgia and his or her spouse. Fibromyalgia syndrome is characterized by painful, tender, and stiff muscles, tendons, and soft tissue, and consists of general musculoskeletal pain that spreads all over the body. Fibromyalgia causes significant limitations in functional abilities, and the chronic features of fibromyalgia also have a "corrosive effect" on a committed couples relationship (Williamson, 1998, p. 94). This study will consist of a semi-structured interview of a married couple, in which one of the spouses has been diagnosed with fibromyalgia by their physician. The couple will be interviewed separately, and will be asked to describe how fibromyalgia has impacted their life and subsequently their marriage. The interviews will be audio recorded and transcribed by the researcher, and data will be analyzed phenomenologically and according to heuristic methodology. Phenomenology tries to understand a phenomenon by capturing the lived experiences of subjects. Heuristic inquiry focuses on understanding human experiences and includes a "wide open investigation". This study will serve to inform the practice of occupational therapy of the various course and effects of fibromyalgia in daily life and in the occupation of marriage, and will subsequently lead to more effective treatment planning for individuals with fibromyalgia.



# **AN ICONOGRAPHIC STUDY OF THE TLINGIT TOTEM POLE LOCATED IN JOLIET, IL**

Sharon L. Quarcini and Arthur Bourgeois\*

Art History  
Division of Liberal Arts, CAS

## **ABSTRACT**

The purpose of this research is to interpret a Tlingit totem pole presently located in Pilcher Park, Joliet, Illinois. The pole originated in Alaska and was carved by a Tlingit Indian in the year 1912, and was initially interpreted by Vivian Ziech in the year 1915. The objective of this research is to provide an analysis of the pole within the context of Tlingit imagery and Northwest Coast society.

This Tlingit totem pole was commissioned by J. O. Barrett, owner of Barrett's Hardware Store, Joliet, Illinois, who became interested in the totem poles created by the Tlingit Indians after a family trip to Alaska. Barrett brought the pole back to Joliet, Illinois where the hardware store was located and placed it at the southeast corner in front of the store. The totem pole remained at this location until the early 1930's when it was relocated to Highland Park and placed in front of a log cabin commissioned by the Kiwanis Club for the local Boy Scouts. The totem pole resides at this same location today, which is now known as Pilcher Park.

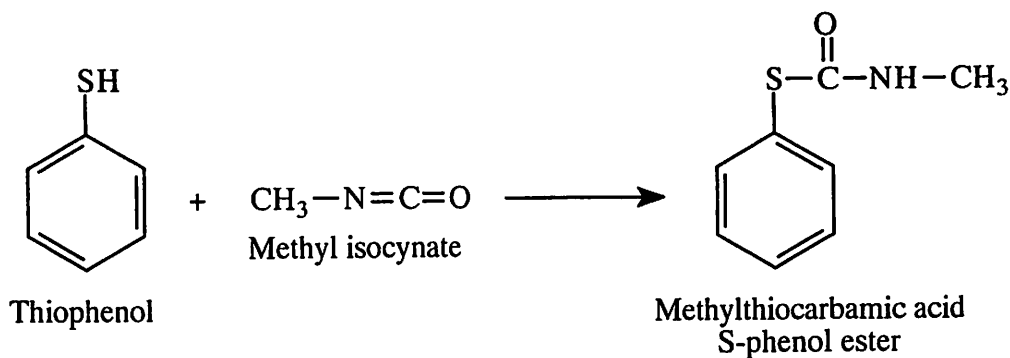
# THE SYNTHESIS AND PHOTOLYSIS OF A THIOCARBAMATE (METHYLTHIOCARBAMIC ACID S-PHENOL ESTER)

Soretta Patton and Joseph Addison\*

Analytical Chemistry  
Division of Science, CAS

## ABSTRACT

Thiocarbamates are used in agriculture as insecticides, herbicides, and fungicides. Additional uses are as biocides for industrial or other commercial application and in house hold products but mainly as herbicides and fungicides. In this work, a thiocarbamate was synthesized, characterized and photolyzed in ethanol. S-phenol ester thiocarbamate was synthesized, recrystallized, and tested for bio activity. It was found that both the synthesized and the photolysis product indicated that they are cholinesterase inhibitors. The eight hour photolysis in ethanol yielded a photolysis product characterized by IR, UV, NMR and MS to be the *meta* substituted Photo Fries rearranged product.



# INFORMATIONAL TECHNOLOGY PROJECT PLANS SHOULD INCLUDE MODIFYING ORGANIZATIONAL BEHAVIOR

Debra Zyer and Jun Zhao\*

Liberal Arts/Business Administration  
Board of Governors

## ABSTRACT

Changes in the work environment are endless. Organizational change is part of the climate the Information Technology (IT) industry produces. However, the rate at which technology changes is more rapid than the speed at which the behavioral modifications required to make an IT project successful can be shaped. Because of the ever-evolving nature of this industry, it is imperative that a look at how to subdue the impact these changes make on the organization's culture must be investigated.

One factor that should always be considered when planning to roll out a new or modified computer system is the impact that it has on the employees. This is the non-technical aspect of a technology-based project! Whether a simple screen is improved or a major procedure implementation needs to take place, the end-user is always affected.

It has always been the goal of the IT department to improve how a business operates. However, project success depends on the reception and adherence to the new system. This will depend largely on the human factor of the project. It is because of this that thought must go into not only how the system is rolled out to the users, but that project design must include plans to address the various behaviors that may arise. After all, where's the validity to instituting a costly, integral IT project if user opposition prohibits it from accomplishing its desired outcome?

# **THE PSYCHOLOGICAL ABUSE ASSESSMENT FOR THE WORKPLACE: INITIAL TESTS OF VALIDATION**

Lori Davis and Lori McKinney\*

Psychology  
Division of Psychology and Counseling, COE

## **ABSTRACT**

Psychological abuse in the workplace is a burgeoning concept fortified by current aggressive workplace theories such as emotional abuse, bullying and gender harassment. Each of these theories is characterized with nearly identical conceptual definitions as psychological abuse. Yet, workplace psychological abuse itself has no literature or measurement instruments currently available. Therefore, the present study was asserted in order to fill this apparent gap in the literature. The Psychological Abuse Assessment for the Workplace (PAA-W) was designed especially for use with workplace populations. Convergent, discriminant, criterion-related, and concurrent validity were all examined. Results support the validity of the PAA-W as an accurate and reliable measure of psychological abuse in the workplace. Recommendations for future research are also discussed.

# **SUPPORT SERVICES AND ACCESS TOOLS NEEDED TO INSURE THE HISPANIC POPULATION ENGAGE IN THE HIGHER EDUCATION EXPERIENCE**

Claude Robert Hill and Adriela Fernandez\*

Social Sciences  
College of Arts and Sciences

## **ABSTRACT**

This research paper analyzes the policy mechanisms which Illinois Higher education adheres to while focusing on Hispanics in the educational process. This proposal suggests new approaches to analyzing conventional policy methods that fails to address the socio-economic needs of Hispanic students in education. The paper analyzes statewide reports, surveys, and studies that are currently used to assess deficits in support services and attaining Associate degrees, Bachelor degrees, Masters Degrees, and Doctorate degree for Hispanic students.

This work offers recommendations and possible new support services which will encourage Hispanic students to stay in education and graduate from college. Also, this research paper assesses the public policy formulation and implementation process. It is the thorough understanding of the public policy process that enables the average citizen to be politically prepared to participate in the public policy process.

In conclusion, this research paper will propose how to add Hispanic culture to the Public policy process, in order to achieve more funding for educational initiatives that will encourage and keep Hispanic students in education. The Hispanic population is the majority now! It is time to listen to the bilingual voice and advance culture of the American citizens of tomorrow.

# DISPARITIES IN HEALTH OUTCOMES: THE IMPACT OF RACE AND GENDER ON ISCHEMIC CONGESTIVE HEART FAILURE

Lisa Aponte-Soto, Shilpa Gupta, Yang-Hee Joo, and Jay J. Shen\*

Health Administration Program  
Division of Social Work, Addiction Studies, and Health Administration, CHP

## ABSTRACT

**Objective:** Ischemic congestive heart failure (IHD) is among the categories of cardiovascular disease, the leading cause of mortality among Americans. Because limited research has evaluated the relationship between gender, ethnicity and IHD, this study examines the relationship between race and outcomes among females with IHD.

**Data:** A total of 78,235 IHD patients with 49.8% females were abstracted from the 2000 National Inpatient Sample.

**Outcome Measures:** (1) The greater severity of illness observed by the higher frequency of emergency department (ED) admissions; (2) resource consumption examined through the patient length of stay (LOS) and total charges; and, (3) outcomes of care examined through age at death.

**Results:** Higher percentages of African-American (AA), Hispanic American (HA) and Asian/Pacific Islander (APPI) women were admitted through ED (78.3%, 75.4%, & 71.4%, respectively) than that of whites (65.1%). Minority females experienced longer LOS (AAs 5.6 days, HAs 5.6, APPIs 5.7) than whites (5.5) and incurred higher total charges (\$17,407 – AAs, \$19,498 – HAs, \$21,471 – APPIs) in comparison to whites (\$15,325). Females from all ethnic subgroups died younger (age at death 74.9 for AAs, 76.7 for HAs, & 78.4 for APPIs) than whites (age 79.6).

**Conclusions:** IHD disproportionately affects minority females who incur poorer outcomes because of unequal access and delayed treatment. Further research needs to be conducted to determine the underlying factors of the racial disparities in outcomes among women with IHD.

## REDUCING PUBLIC SPEAKING ANXIETY

Thomas C. Lux and Ana Kong\*

Communication and Training  
Division of Liberal Arts, CAS

### ABSTRACT

While monitoring Moraine Valley Community College's first offering of COM-103 on the Internet, I was quite surprised when the chat room of the online class responded to the fear of the upcoming required speeches. Even people, who deal with the public all day long, like waitresses, spoke of their horror about standing up in front of a group to speak. The safety of anonymity on the Internet allows them to express their fear openly. To learn what has been discovered about speech anxiety through research, I reviewed many professional journal articles and selected twenty.

In my work as a sales trainer I teach overcoming fear to salespeople. I discovered many of the same principles are involved. Some of the more notable ideas presented were; visualization methods, systematic desensitization, skills training, and cognitive modification. Factors that are often overlooked are the effect of the familiarity of the audience, the state of the preceding speaker, the congeniality of the audience, and the connection to planning. Some of the naïve attributions about the reasons for public speaking anxieties were challenged, such as, making mistakes, unfamiliar role, humiliation, negative results, rigid rules, personality traits, preparation, audience interest and physical appearance. The peak of the psychological anxiety pattern in public speaking occurs during the anticipatory period. The instructor's announcement of a speaking assignment evoked the second highest level of anxiety. In-class preparation of public speaking assignments produced the lowest level of anticipatory state and trait anxiety.

# **SOURCES OF FINANCING FOR PRIVATE ENTERPRISES IN PARAGUAY, NIGERIA AND GHANA**

Richard Kofi Osei and Hikki Heino\*

Business Administration  
Division of Accounting, Finance, and Economics, CBPA

## **ABSTRACT**

The world has recently entered into an era of unprecedented worldwide production and distribution.<sup>1</sup> Therefore companies worldwide are finding ways and means to expand by planning and managing financial resources well. Companies in advanced countries like the U.S, Germany, Japan and others easily finance capital projects through many different sources. The most common among these sources are the issue of bonds, direct loans from financial institutions, issuance of stocks, and other debt equity instruments.

While these sources are easily available to companies in the advanced countries, it seems to differ in the developing countries like Ghana, Nigeria, Bangladesh, Mexico and so on. This studies will mainly stress on how private small enterprises in Ghana, Nigeria and Paraguay specifically, raise funds to finance capital projects. The loans from banks are available, but because of their high rate of interest, and other risks involved in lending to these private enterprises, loans from the commercial banks does not help much. Therefore, most of these enterprises depend on other sources like low interest loans from development banks, NGO's, and help from family members and friends.

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<sup>1</sup> Global Corporate Finance (Text & Cases) third edition, Suk H. Kim & Seung H Kim, page 3



# **A STUDY OF TWO SMALL COMMUNITIES IN THE SOUTH SUBURBAN REGION OF CHICAGO, EACH OF WHICH HAS A HIGH-QUALITY NATURE PRESERVE. WHY DOES ONLY ONE COMMUNITY HAVE A NATURE CENTER?**

Patricia Brownlow and Frances Kostarelos\*

Liberal Arts  
Board of Governors

## **ABSTRACT**

The two communities of Markham and South Holland have Nature Preserves within or adjacent to their boundaries. Markham contains The Indian Boundary Prairies; native Illinois prairies much like they were in presettlement days. The Markham-Gensburg Prairie, a site of 200 acres, was dedicated in 1988 as a National Natural Landmark by the United States Forest Service.

South Holland has a Cook County Forest Preserve of many acres at the east end of the village. Within the Forest Preserve is the Sand Ridge Nature Center operated by the District which offers special environmental educational opportunities. Markham should also have a Nature Center offering these same opportunities to the community. Why has this not been done? Perhaps researching the history of the towns would help to answer the question. Both of the communities had similar beginnings which will be explored in the presentation. South Holland and Markham also have considerable differences in the history of their early days.

My interest in the idea of a Nature Center in Markham comes from more than a decade of volunteering as a steward on one of the Indian Boundary Prairies, the Dropseed Prairie. As a member of a local organization, The Friends of the Indian Boundary Prairies, we lead tours, monitor plants and animals, clear exotic species, collect seeds and in general perform the tasks necessary for the preservation, restoration and public education of and about the prairies. It surprised me to learn that many, particularly local people, do not know about the native prairies in their own community. Perhaps a Center with information, displays and hands-on exhibits would be just what is needed to peak the interest to learn about these unique sites and therefore value and protect some of the last acres of prairie left in our State.

## KNOWLEDGE FOR DEVELOPMENT

Kenneth F. Earls and Adriela Fernandez\*

Communications and Training  
Division of Liberal Arts, CAS

### ABSTRACT

This work is a critical examination of the possibility of creating and using a Knowledge Structure Measure and the impact this could have on the continued processes of development of Less Developed Countries (LDCs), in the current climate of globalization and interconnectedness. A critical evaluation of the scholarly work to date on this topic shows that many aspects of interdependence, international law, culture and religion can promote or hinder the acquisition of knowledge by an LDC. This work concludes that the treatment of knowledge could be done in a similar fashion to the treatment of the concept of entitlement developed by Amartya Sen in his work on development as freedom. Moreover, this work found that the creation of an accurate measure of a country's available knowledge and technology could be used proactively by world organizations, national governments, state and local governments, and development minded NGO's and MNC's. At least some LDC could move forward along the path to development and the North-South Dilemma could be ameliorated by using the creation of an International Knowledge Structure Measure.

**Significance of this work:** This measure could be used, among others, in reworking of international legal binding and non-binding agreements, fostering the sharing and dissemination of Intellectual Property Rights, understanding cultural and religious backgrounds and the pursuit of growth through trade.

# **THE TIGHTROPE WALK OF HUMAN RESOURCE PROFESSIONALS**

Donna Nemeth and Marsha Katz\*

Business Administration  
Division of Management, Administrative Sciences, Marketing, and Public Administration,  
CBPA

## **ABSTRACT**

For most Americans the events of September 11, 2001 while not forgotten had started to fade during that first year. At the same time HR professionals around the nation were looking ahead to the one-year anniversary of September 11. They knew that this day would need to be commemorated, but how? Considerations had to be given to employees who may not wish to participate in any ceremonies verses those that wished or even needed to have a memorial commemoration. Walking this very precarious tightrope became a focus point for many HR professionals.

At the end of September 2002, an e-mail was sent to the top 50 privately held and public companies in Chicago, Illinois. The single question asked in the survey, was how did the company honor the September 11 one-year anniversary. This question was purposely left open-ended leaving room for any type of response.

Of the responses received, 96% of the companies had some type of planned events for the day. It was evident that the most difficult decision was not in whether or not to honor the day but rather how much is too much. Knowing that grief is a very personal emotion, employers seemed to be very cognizant of their employees' feelings and tried hard not to mandate what people should do or how they should feel.

In the end the tightrope that the HR professionals walked between what was too much as opposed to what was not enough appears to have been maneuvered successfully. Not one of the responses received stated that they wish they had done things differently.

# **THE EVOLUTION OF MEDICARE REFORM: THE ENACTMENT OF THE MEDICARE+CHOICE PROGRAM**

Lisa Aponte-Soto and Kyusuk Chung\*

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## **ABSTRACT**

Since its inception in 1965, Medicare has evolved adapting to market changes, the growth of managed care and the increasing healthcare expenditures. More recently under the Clinton administration, efforts to balance the federal budget have resulted in the enactment of the Medicare+Choice (M+C) program as a means to control the inflated Medicare expenses by increasing payer competition. This paper examines the evolution of the Medicare program and the effectiveness of the 1997 amendment through the M+C program and its subsequent revisions. Research data from the Journal of American Medical Association, the Century Foundation Press, the Rural Policy Research Institute and the Congressional Research Survey indicate that the M+C program and its amendments have failed to meet their objectives. The promotion of home healthcare to decrease hospital care costs for the elderly did not succeed at decreasing inflation, but rather shifted the costs of care. Studies of managed care patterns also suggested that although M+C intended to increase benefits to beneficiaries through the expansion of choice, it has compounded the problems of inequality: favored selection of beneficiaries who are younger and healthier, limited services provided to urban eligibles, selection of cost-effective providers and restricted healthcare services and medication coverage. Congress is currently working on proposals to amend M+C, some features that will be addressed include extending coverage for pharmaceuticals.

# **MOVEMENT, TRANSPORTATION & SHARED SPACES A CASE STUDY: BURBANK, ILLINOIS**

Claudia Robuck Fran Kostarelos\*

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## **ABSTRACT**

Synapses of research collected for the Governors State University Human Geography final class project in the Spring 2003 semester. A case study of a five-mile area with a center of 79<sup>th</sup> & Cicero Avenue was identified and research was performed. Information was gathered through reference sources at local libraries, empirical observations, interviews and a primary data source of the World Wide Web. Regional history and geographic characteristics were studied in a conceptual tool context with the emphasis of movement and shared urban spaces. Concepts of migration, diffusion, pull/push factors, transportation, infrastructure, demography, urban sprawl and industrialization were deployed.

# POSTER PRESENTATIONS

# PHYSICIAN-PATIENT COMMUNICATION DURING MEDICAL CONSULTATIONS

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## ABSTRACT

The healthcare industry is changing at a rapid rate. Patients have access to state-of-the-art technology, the latest treatment options and more healthcare information than ever before. Ironically, although we are living in the Information Age and at a time of global communication, we're faced with a breakdown in communication between patients and physicians, decreased patient satisfaction, increasing numbers of complaints, rising malpractice claims and a switch from conventional medicine to unproven alternatives. Diagnosing and treating disease is simply not enough. Physicians have to become better communicators.

There is considerable evidence for the importance of effective communication between physicians and patients, as demonstrated in my survey of research literature. This includes the studies on whether or not physicians have improved in soliciting their patients' agendas; patients' and physicians' opinions on the important elements of outpatient care; primary care physician communication patterns; and the relationship of physician-patient communication with malpractice claims. This study also discusses the impact of the Information Age on physician-patient communication and the importance of teaching communication skills in the medical education curriculum.

## **Methods Development for the Evaluation of the Distinct Separation of Small Sample Volumes (Acetylene, Ethylene) per Gas Chromatography.**

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### **ABSTRACT**

Parametric studies were conducted to design and develop methods for the effective separation of significantly small samples of acetylene and ethylene. These studies were done in an effort to collaborate with biological research focused in on the detection of  $N_2$  Fixation in microorganisms inherent in soil with low or devoid of nitrogen. It has been shown that the enzyme nitrogenase is able to reduce acetylene to ethylene. Because the end product (ethylene) could be detected with great sensitivity by gas chromatography it has become the most used assay procedure for the measurement of  $N_2$  fixation. It is to this end that methods were developed for the detection and separation of acetylene and ethylene carried out on Poropak Q and Poropak R packed columns. Whereas minimum injection volume and optimum temperature were determined experimentally-attenuation and flow rate remained constant. Poropak GC packings are cross linked polymers which can be used in GC columns without a stationary phase coating. Each component when observed individually exhibited retention time linearly with column temperature was determined as 70°C with a flow rate of 30 cc/min, attenuation of 1, minimum injection of 0.5 ml. Separation of the mixture of 1:1 acetylene and ethylene was not observed for the Poropak Q column. However, separation of mixture was observed for the Poropak R column. Small samples of acetylene and ethylene mixture are effectively separated with developed methods.



# THE EFFECTS OF MUSIC ON MATERNAL STRESS DURING PREGNANCY

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## ABSTRACT

The purpose of this research is to investigate the effect, if any, of music on maternal stress during pregnancy. In a woman's life, pregnancy can be both an exciting and a stressful period. A new mother may be under stress because she has multiple roles as a caregiver. Some stress is normal, but chronic stress can become overwhelming. One way a pregnant woman might learn to handle stress is through the use of music. The research project will use a primigravid who is at 28-36 weeks pregnant. The subject will be a volunteer recruited from the hospital Lamaze class. The subject will follow a protocol of listening to music of her choice for a period of 15-30 minutes a day. Before and after she listens to the music, she will take and record her own blood pressure, pulse, and stress card readings and record her findings in a daily journal that will be provided by the researcher. Data will be collected for a period of two weeks. The data will be analyzed to determine any possible effect music may have on reducing maternal stress during pregnancy.

# **SOUTH SUBURBAN RESIDENTIAL CONSTRUCTION: A COMPARATIVE STUDY TO THE WORK OF FRANK LLOYD WRIGHT**

Michael W. Fanello and Frances Kostarelos\*

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## **ABSTRACT**

The project is based on field photographs and observations. I further examine my findings with bibliographical information. Ultimately, I plan to paint a picture for all to consider when in the market for a new home.

The vision I have for this project is for it to have an impact, even if it is a minute one, on a rethinking the “cookie cutter” model structuring new housing development in Chicago’s South Suburbs. For this project, I chose an area of Chicago Heights, Richton Park, and University Park. I also made a site visit to Oak Park, Illinois to photograph homes designed by Frank Lloyd Wright. One of the objectives of this project is to direct attention to the construction material and design emergent on the landscape and to compare it to Frank Lloyd Wright’s work the early 1900s. FLW provides an alternative to the Victorian style homes that predominately stood in the Oak Park area. In his vision these homes were not right for an area with prairie attributes. Their vertical emphasis, “pasted” decor, plain windows, and box-like design did not articulate with the environment according to Wright. My research suggests that Frank Lloyd Wright pointed the way to a vision that perhaps could be part of a regional conversation on new housing development.

## PERCENT OF ZINC IN THE U.S. CENT (PENNY) DATA ANALYSIS

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### ABSTRACT

Zinc is a metal that is part of the composition of the U.S. Cent. This composition is determined by statute, and for the time period 1864 – 1962 the composition of the U.S. cent was 95% copper, 5% tin and zinc, with the amounts of the tin and zinc to be determined by the Director of the Mint. Using the lab procedure created by Ms. Lina Zayed, with modifications, students from local high schools preformed the Zinc experiment on various years of U.S. Cents. The students analyzed their samples for Zinc concentration using the Atomic Absorption Spectrometer against standard concentrations.

The research being conducted by the authors is aimed to determine, not only what the composition of the U.S. cent is, but also how reliable are the inexperienced students' data. Comparison is made randomly against the students' data, with the experienced authors' own data. Also determined is the reliability of the data that is collected by teams of students against single students. As a result of this analysis of inexperienced students' data, the procedure for determination of Zinc has been revised.

# **THE ROLE OF THE OCCUPATIONAL THERAPIST IN INCREASING FUNCTIONAL HAND MOVEMENTS IN CHILDREN WITH SPASTIC CEREBRAL PALSY RECEIVING BOTOX INJECTION**

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## **ABSTRACT**

Cerebral palsy has the potential to limit the child's normal development at home, in school and social activities. Botox is a new medical treatment that has the potential track record of diminishing spasticity and improving function. It was the purpose of this study to investigate the involvement of occupational therapists with the clinical studies on Botox follow up and the partnering of the therapists with neurologists, physiatrists and pediatricians who use Botox. It was also the purpose of this research to explore the occupational therapy process and to understand the clinical reasoning of the occupational therapist when partnering with these specialists who use Botox to increase range and function of the hand in children having cerebral palsy. An occupational therapist at a pediatric rehabilitation facility was interviewed to determine the occupational therapy process and clinical reasoning used by the therapist. The researcher observed and videotaped one therapy session at a designated facility during the process of this study.

The research questions that were answered during the course of this study were:

- What occupational therapy process(s) is/are involved in increasing functional hand movements in children receiving botox injection to reduce spasticity as a result of cerebral palsy?
- What type of clinical reasoning is the occupational therapist using in intervention, and why is she using the type of reasoning that they choose to use?

## **Inhibition of Butyrylcholinesterase by Phenyl Thiocarbamate**

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### **ABSTRACT**

Weeks (1992), using the Rappaport method (1959) for assaying cholinesterase, showed that N-methylphenyl thiocarbamate, synthesized by Harper (1990), inhibited hydrolysis of acetylcholine by the cholinesterase in horse serum. Gronert (1993), using the same assay, showed inhibition of hydrolysis of butyrylcholine. However, neither Weeks nor Gronert were able to obtain data adequate for estimating the  $K_M$  and  $V_{max}$  of the reactions. As a result, they could not determine whether inhibition was competitive or non-competitive. Their work has been repeated, using the hydroxamate procedure for acylcholine (Augustinsson, 1957) with isolated horse serum cholinesterase (Sigma) and butyrylcholine. Tests were done on the phenyl thiocarbamate before and after photolysis and on Carbaryl, the carbamate found in Sevin pesticide. It was found that (1) almost 50 times as much the phenylthiocarbamate as Carbaryl was needed to give 50% inhibition of butyrylcholinesterase; (2) inhibition by Carbaryl seemed competitive; that is, it was reversible by increasing the level of substrate; (3) inhibition by intact phenyl thiocarbamate also appeared competitive, but (4) inhibition by photolyzed phenylcarbamate was non-competitive and only partially reversed by increasing the concentration of substrate.

### **REFERENCES:**

- Augustinsson, K.-B. (1957). Cholinesterases. In Glick, D. (Ed.) *Methods of Biochemical Analysis*, V, pp. 2-56.
- Gronert, D. L. (1993) Determination of the Michaelis-Menten constant of horse serum cholinesterase, using butyrylcholine as substrate. M. S. project report, Analytical Chemistry, Governors State University, University Park, IL.
- Harper, T. (1990) Synthesis and characterization of a novel thiocarbamate. M. S. project, Analytical Chemistry, Governors State University, University Park, IL.
- Rappaport, F., Fischl, J., and Pinto, N. (1959). An improved method for the estimation of cholinesterase activity in serum. *Clin. Chim. Acta*, 4, 227-230.
- Weeks, D. E. (1992). Determination of biological activity in newly synthesized carbamates. M. S. thesis, Environmental Biology, Governors State University, University Park, IL.

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